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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,066	10/23/2003	Osamu Sekihata	FUJH 20.698	7290
26304	7590	11/27/2007		
KATTEN MUCHIN ROSENMAN LLP			EXAMINER	
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NEW YORK, NY 10022-2585				
			ART UNIT	PAPER NUMBER
			2616	
			MAIL DATE	DELIVERY MODE
			11/27/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/692,066	<b>Applicant(s)</b> SEKIHATA, OSAMU	
	<b>Examiner</b> Feben M. Haile	<b>Art Unit</b> 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-12 is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/18/2007</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Argument***

1. In view of applicant's amendment filed October 30, 2007, the status of the application is still pending with respect to claims 1-12.

2. The amendment filed is insufficient to overcome the rejection of claims 1-3 based upon Kalman et al. (US 6, 680,912), IEEE 802.17 Working Group, "Proposed Draft Standard: Part 17: Resilient Packet Ring Access Method and Physical Layer Specifications", hereinafter referred to as IEEE 802.17 Draft, and Oran (US 7,085,224) set forth in the last Office action because: the material added to the claims fail to further clarify a distinction between the Applicants invention and the cited references, thus the subject matter is not patentable.

### ***Information Disclosure***

3. The information disclosure statement filed September 18, 2007 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the Japanese Office Action does not include an English translation. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with

the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3 rejected under 35 U.S.C. 103(a) as being unpatentable over Kalman et al. (US 6, 680,912), hereinafter referred to as Kalman, in view of IEEE 802.17 Working Group, "Proposed Draft Standard: Part 17: Resilient Packet Ring Access Method and Physical Layer Specifications", hereinafter referred to as IEEE 802.17 Draft, in view of Oran (US 7,085,224), hereinafter referred to as Oran.

**Regarding claim 1**, Kalman discloses on detection of a link failure between mutually neighboring layer 2 switches, transmitting a failure notification frame packet from each neighboring layer 2 switch (**figure 4 and column 6 lines 39-44; for a span break, the two nodes on the ends of the span will each send out a link status message reporting the failure to all nodes on the ring**).

Kalman fails to explicitly suggest in a layer 2 switch having received the failure notification frame, recording a Media Access Control (MAC) address of said layer2 switch having received the failure notification into the failure notification frame, and transferring the failure notification frame to a neighboring layer 2 switch.

IEEE 802.17 Draft teaches a node transmits topology discovery packets to another node, that node updates the topology map with a MAC address, and forwards it to the next node where the updating and forwarding is repeated. Furthermore, besides discovery, the topology could be updated when a fiber failure is detected (**page 85; section 13 Topology Discovery**).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the topology discovery method taught by IEEE 802.17 Draft into the ring topology disclosed by Kalman. The motivation for such a modification is to provide a protection mechanism.

Kalman, IEEE 802.17 Draft, and/or their combination fail to explicitly suggest providing in each layer 2 switch an address learning table in which a Media Access Control (MAC) address and a corresponding port are stored.

Oran teaches an Ethernet layer 2 switch (**figure 1 unit 14 and column 2 lines 43-44**) that includes a table that identifies MAC addresses associated with each port (**figure 6 unit 62 and column 4 lines 41-42**).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the fast failure detection taught by Oran into the fast communication topology in a ring network disclosed by Kalman as modified by the topology discovery method suggested by IEEE 802.17 Draft. The motivation for such a modification is decreasing the number of data loss that occurs by traveling over failures.

**Regarding claim 2**, Oran discloses wherein, on receipt of the failure notification frame in a layer 2 switch having a blocking port, said layer 2 switch stores a record,

indicative of the layer 2 switch of interest having a blocking port, into the failure notification frame (**column 3 lines 14-20; the switch sends a failure notification message when determining a port is no longer operational**).

**Regarding claim 3**, Kalman transmitting a failure notification frame packet from the layer 2 switch having detected the failure (**figure 4 and column 6 lines 39-44; for a span break, the two nodes on the ends of the span will each send out a link status message reporting the failure to all nodes on the ring**).

Kalman fails to explicitly suggest transmitting a state notification frame from a layer 2 switch connected in the ring shape successively to neighboring layer 2 switches; in the neighboring layer 2 switch, detecting that the corresponding neighboring layer 2 switch is faulty when the state notification frames are not received for a predetermined number of times; recording a Media Access Control (MAC) address of the layer 2 switch having received the failure notification frame into said failure notification frame; and transferring from the layer 2 switch having received the failure notification frame the failure notification frame to a neighboring layer 2 switch.

IEEE 802.17 Draft teaches a node transmits topology discovery packets to another node, that node updates the topology map with a MAC address, and forwards it to the next node where the updating and forwarding is repeated. Furthermore, besides discovery, the topology could be updated when a protection switch is requested (**page 85; section 13 Topology Discovery**), where a protection switch is initiated around a station that is marked faulty because it did not receive a fairness packet that is sent

periodically to all the stations within a keep-alive time out interval (**page 83; section 12.5 RPR Fairness Packet**).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the topology discovery method taught by IEEE 802.17 Draft into the ring topology disclosed by Kalman. The motivation for such a modification is to provide fair access for all stations on the ring.

Kalman, Darwin, and/or their combination fail to explicitly suggest providing in each layer 2 switch an address learning table in which a Media Access Control (MAC) address and a corresponding port are stored.

Oran teaches an Ethernet layer 2 switch (**figure 1 unit 14 and column 2 lines 43-44**) that includes a table that identifies MAC addresses associated with each port (**figure 6 unit 62 and column 4 lines 41-42**).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the fast failure detection taught by Oran into the fast communication topology in a ring network disclosed by Kalman as modified by the topology discovery method suggested by IEEE 802.17 Draft. The motivation for such a modification is decreasing the number of data loss that occurs by traveling over failures.

#### ***Allowable Subject Matter***

5. Claims 4-12 allowable. The following is an examiner's statement of reasons for allowance:

The prior art of record fails to disclose, teach, and/or fairly suggest " wherein, when the network is separated into two network groups caused by a failure, with respect to a host address connected to an arbitrary layer 2 switch, updating path information in the address learning table in a layer 2 switch belonging to the other group than the group to which said layer 2 switch belongs, so that a packet transmission direction on the ring is shifted to a port side opposite to the direction having been used up to the present".

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Response to Arguments***

6. Applicant's arguments filed October 30, 2007 have been fully considered but they are not persuasive.

The Applicant respectfully traverses that IEEE 802.17 Draft fails to teach forwarding of the topology map following a failure. The Examiner respectfully disagrees with the Applicant. IEEE 802.17 Draft discloses a node transmits the topology map to another node, that node updates the topology map with a MAC address, and forwards it to the next node, where the updating and forwarding is repeated. Furthermore, IEEE 802.17 Draft suggests the topology map could be updated when a fiber failure is detected. During topology discovery, the map is forwarded after updating is complete,



therefore following the step of updating when the fiber failure is detected, the topology map could also be forwarded. Hence as the claims are interpreted in their broadest sense, the Examiner believes that IEEE 802.17 Draft indeed does render the Applicant's invention obvious.

The Applicant respectfully traverses that IEEE 802.17 Draft teaches away from the features as clearly defined in the claims. The Examiner acknowledges that IEEE 802.17 Draft does disclose that eventually the node that generated the topology discovery packet gets back the packet. However, the Examiner understands these teachings to correspond to the situation of topology discovery. Since the cited reference is relied upon for the embodiment where the topology deals with fiber failure, in this situation either a) the node that generated the topology packet obviously cannot get the packet back or b) the node that generated the topology packet could get the packet back in a system designed of a wrap protection, which is defined in section 14 of the IEEE 802.17 Draft. Therefore as the claims are interpreted in their broadest sense, the Examiner believes that IEEE 802.17 Draft indeed does render the Applicant's invention obvious.

### ***Conclusion***

**7. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

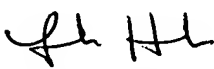
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

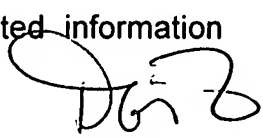
TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Feben M. Haile whose telephone number is (571) 272-3072. The examiner can normally be reached on 6:00am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on (571) 272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
11/21/2007

  
DORIS H. TO  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER